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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/632,739	08/04/2000	Clyde C. Bryant	E025 1031	6690

7590 08/29/2005  
Isaf Vaughan & Kerr  
P O Box 72060  
Atlanta, GA 30358-2601

EXAMINER

KOCZO JR, MICHAEL

ART UNIT PAPER NUMBER

3746

DATE MAILED: 08/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/632,739

Applicant(s)

BRYANT, CLYDE C.

Examiner

Michael Koczo, Jr.

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2004.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 42-50, 52-57, 59, 60, 74 and 89-115 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 42-50, 52-57, 59, 60, 74 and 89-107 is/are allowed.  
6) ☒ Claim(s) 108, 109 and 112-115 is/are rejected.  
7) ☒ Claim(s) 110 and 111 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 108, 109, 112 and 115 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakurai et al. (JP 58-62314). Sakurai et al. disclose an internal combustion engine wherein a first air charge component is directed into a cylinder through intake 4, a second air charge component is directed into the cylinder through intake 6. Valve 16 of intake passage 6 has variable valve timing. The variable valve timing will control the turbulence, density etc. of the air charge in the cylinder. The second air charge is compressed by compressor 18 prior to introduction into the cylinder. The second air charge is introduced after compression has begun (see valve timing diagram in figure 3). The air charges are directed into the cylinder through different ports.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3746

Claim 113 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. (JP 58-62314) in view of Brown (US 4,058,096). Brown discloses cooling of the intake air in order to increase its density and the power output of the engine. In view of this teaching, it would have been obvious to cool the first air charge of Sakurai et al. (JP 58-62314).

Claim 114 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. (JP 58-62314) in view of Okimoto (US 4,633,844). Okimoto discloses an internal combustion engine wherein plural air charges are fed to an engine cylinder through separate inlets. The secondary air charge is compressed by compressor 48 and then cooled in intercooler 50 in order to increase its density. In view of this teaching, it would have been obvious to provide intake passage 19 of Sakurai et al. with an intercooler to increase the density of the secondary air charge.

#### ***Allowable Subject Matter***

Claims 110 and 111 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 42 to 50, 52 to 57, 59 to 60, 74 and 89 to 107 are allowed.

#### ***Information Disclosure Statement***

The information disclosure statements filed January 6, 2005, March 17, 2005, April 6, 2005 and June 6, 2005 fail to comply with 37 CFR 1.98(a)(3) because they do not include a concise explanation of the relevance, as it is presently understood by the individual designated in

Art Unit: 3746

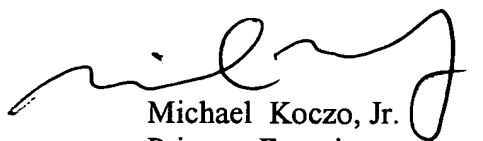
37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. They have been placed in the application file, but the information referred to therein has not been considered.

Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kocz, Jr. whose telephone number is 571-272-4830. The examiner can normally be reached on M-Th; 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached at 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Kocz, Jr.  
Primary Examiner  
Art Unit 3746